

A MICRO TALE OF A TRADE-OFF:
STRUCTURAL CHANGE VERSUS BALANCE OF PAYMENTS EQUILIBRIUM IN
AN EGYPTIAN FOREIGN INVESTMENT PROJECT IN ALGERIA

*MICRO RELATO DE UN TRADE-OFF:
CAMBIO ESTRUCTURAL VERSUS EQUILIBRIO DE BALANZA DE PAGOS EN UN
PROYECTO DE INVERSIÓN EGIPCIA EN ARGELIA*

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ABSTRACT

Resource-rich economies can find themselves trapped in a dilemma over whether to prioritize processes of structural change or to preserve their balance of payments equilibrium. The objective of national development strategies to diversify the productive structure might reflect on the attraction of foreign direct investment projects, with a negative impact on net exports – therefore leading to current account deficits and increased needs of external financing. This article analyses this macroeconomic trade-off, through the particular case of one Egyptian direct investment in Algeria by way of a cable manufacturing company. The case study is conducted following a previously elaborated methodological framework for the study of the development effects of foreign direct investment (FDI).

Keywords: Foreign Direct Investment; Development; Algeria; Balance of Payments; Structural Change.

RESUMEN

Las economías ricas en recursos naturales pueden verse atrapadas en un dilema: dar prioridad a los procesos de cambio estructural o preservar el equilibrio de la balanza de pagos. El objetivo, presente en diversas estrategias de desarrollo nacionales, de diversificar la estructura productiva puede pasar por la atracción de proyectos de inversión extranjera directa con un impacto negativo en las exportaciones netas –llevando por lo tanto a déficits por cuenta corriente y a una necesidad creciente de financiación exterior. Este artículo analiza este *trade-off* macroeconómico mediante el caso particular de una inversión directa egipcia en Argelia, en una empresa de manufactura de cableado. El estudio de caso sigue una metodología, previamente elaborada, para el análisis de los efectos en desarrollo de la inversión directa extranjera (IDE).

Palabras clave: Inversión directa extranjera; Desarrollo; Argelia; Balanza de pagos; Cambio estructural.

INTRODUCTION¹

The aim of this paper is to analyze the development effects of foreign direct investment (FDI) at a micro level, by means of the study of an Egyptian cable company settled in Algeria. More specifically, we will highlight a trade-off between two development objectives (structural change and balance of payments equilibrium). This will be done by means of a methodology, previously elaborated, for the analysis of development effects at the micro level (Olivie and Pérez, 2014). Therefore, a secondary objective of this paper is to illustrate this methodology.

We understand structural change to be a new growth pattern leading to a different combination of productive factors, that in turn results in increased productivity and competitiveness and, above all, triggers a diversification of supply and (possibly) exports. Balance of payments equilibrium could be defined as a situation where the current account is not recording acute deficits –mainly as a result of increased imports– that would inevitably lead to increased needs for external financing and, eventually, higher levels of external debt and the draining of reserves.

We are approaching this debate through analysis of the role played by foreign direct investment (FDI) in these two variables (structural change and balance of payments equilibrium) in a specific economy with an abundance of natural resources: Algeria. More specifically, we have selected one investment project by an Egyptian company whose core business is cable manufacturing. On the basis of a previously defined methodological framework for the analysis of the effects of FDI on development, we track the effects of this investment project on a series of development outcomes, with particular emphasis on structural change and balance of payments equilibrium. Our aim is to build a ‘narrative’ on the effects of a given FDI project on balance of payments and structural change in Algeria, rather than attempting to assess the net macro impact of FDI at the national scale. In other words, we explore the details of a particular FDI-development nexus at the micro level: these results could not be extrapolated at the macro level.

Moreover, this debate on eventual trade-offs between different development objectives in the context of FDI attraction in Algeria connects with a wider debate in development theories and policies. On the one hand, it could

¹ Authors are grateful to the anonymous referee for useful comments.

be argued that countries should stick to Ricardian theories on trade and specialization. For the case of extractive economies such as Algeria's, this would mean taking advantage of the spectacular endowment in natural resources, with huge reserves of oil and gas that have determined the nation's economic growth and export and fiscal revenues for decades. On the other hand, a more interventionist approach (Keynesian, Structuralist or even Marxian) makes the case for the creation of 'new' comparative advantages. This would make sense to the extent that more diversified economies are less affected by the volatility of commodity prices and less prone to international instability, and that extractive industries have a limited capacity for job creation; these and other effects of abundant natural resources could be summed up in the concepts of natural resource curse and Dutch disease².

Actually, this tension between *laissez-faire* policies leading to over-specializations in natural resource-based economic activities and intervening governments driving processes of structural change to more diversified, productive, and job-creating industries plots the contemporary economic history of most developing and emerging countries (including Algeria, as will be seen in next section)³.

This article is organized as follows. The first section following this introduction resumes academic literature on the link between FDI and development, making the case for a micro approach to this phenomenon. The second section summarizes the role of FDI in Algeria's development trends and strategies. Section 2 sets out the methodology for our case study on the development effects of a cable manufacture, the results of which are analyzed in section 3. The final section presents our conclusions.

1. LITERATURE REVIEW

As soon as Development Economics appeared as a specific field of research, and more specifically with the advent in the 1970s of international industrial relocation as a global phenomenon, economists began to focus on the effects of FDI inflows to developing countries (Reuber *et al.*, 1973; Lall and Streeten, 1977). There are few methodological and/or theoretical approaches to this link (Dunning, 1981 and 1988; Narula and Dunning, 2000 and 2010; Moran, 2011). In the early 1980s, Dunning proposed a first step towards a theoretical framework for exploring the way in which FDI (first inward, later outward) might have an impact on development. This IDP (Investment Development Path) literature developed by Dunning (1981, 1988) and Narula and Dunning (2000, 2010) analyses the phenomenon holistically, and with a temporal dimension.

² On natural resources curse see, for instance, Sachs and Warner (2001), Auty (2001), and Ross (2004). Seminal works on Dutch disease include those by Corden and Neary (1982) and Krugman (1987).

³ On this debate, see for instance Amsden (1989), Chang (2002), or Cypher and Dietz (2009).

According to the IDP, countries can progress towards economic development by going through five stages, each of them characterized by distinctive features of FDI, such as (1) the net flow, (2) the characteristics of inflows and outflows, (3) the O advantages –features of the firm, (4) the L advantages –features of the host country, and (5) the economic structure of the host economy. According to the IDP, different combinations of these features (for instance, how O advantages interact with L advantages) will end in different impacts on development, and these combinations will vary over time. However, the strong focus on the technological aspects of investment as the main drivers to development might be ignoring the impact of FDI on other variables linked to development, such as employment, balance of payments, the role of civil society organizations, or the provision of basic goods.

In parallel to this theoretical attempt, a great deal of empirical analyses on FDI and development appeared. Unlike earlier, more vague, approaches to the FDI-development nexus, these tend to test the effects of foreign investment via one or two macro variables in a given sector, in a certain country, and for a specific period of time. The effects most frequently explored by this type of literature include economic growth, innovation and technological spillover, and productivity. Other research explores the link between FDI and local investment, trade, labor, institutional quality, the environment, poverty, human development, and/or inequality⁴.

Most of these works tend to test whether and under what condition(s) a statistical link is found between the two phenomena (FDI on the one hand, economic outputs on the other). The research question in these cases is whether and why FDI is good or bad for development. So, FDI inflows may have a positive impact on a particular variable (say, technological spillovers) in a particular country (China, for instance) for a particular sector (such as the manufacturing sector) for a certain period of time (the last 20 years, for example), all according to a particular econometric methodology and a concrete source and set of data, if some certain previous condition is met (say, absorptive capacity on the part of the host economy).

Therefore, this body of literature faces a challenge –shared with other social sciences research areas– in that the methodological features of the empirical, quantitative econometric literature on the conditions that determine the sign and intensity of the impact of FDI on development fails to completely explain how FDI impacts on development (Crabtree and Miller, 1999; Silverman, 2000). For instance, at the macro level, FDI can record a positive impact on balance of payments equilibrium but this aggregate result could be hiding a negative impact on that same variable of some FDI projects in a specific sector. Moreover, in the case that FDI could be broken down by sectors or even specific projects and exports and imports could be disaggregated accordingly

⁴ A few recent examples are the following: Ndikumana and Verick (2008); Dragin *et al.* (2010); Ali *et al.* (2011); Agbola (2014); Belloumi (2014); Cuadros and Alguacil (2014); Kumar (2014); Lessmann (2013); Seyoum *et al.* (2014); Wang and Chen (2014); Zhang *et al.* (2014).

(something that is generally missing in databases), this type of methodology (that is very efficient in picturing net effects), would lack the narrative on how such effects are triggered. Why are those FDI projects import-intensive? Is it because they are not competitive enough? Or are they outsourcing some activities? On the contrary, is it because they cannot find the inputs they need locally?

Academic literature has tried to respond to these challenges with studies combining econometric and qualitative research techniques (such as Blalock and Gertler, 2005) and also by more qualitative case studies on the impact of FDI on development (for instance, Schrank (2004 and 2008) or Rugraff *et al.* (2009a))⁵. Rugraff *et al.* (2009b) make a strong case for the case-study approach in the exploration of the developmental effects of TNCs, as they permit the use of disaggregated data and are flexible and rich in detail. In more general terms, case studies can capture the multi-causal social, political, environmental, and economic nature of different phenomena (Schrank, 2006).

However, like econometric analysis, qualitative approaches to FDI and development approach the problematic with a 'high degree of freedom'. Firstly, there is not usually a methodological approach that can serve as a guide for case studies on FDI-D: the unit of analysis varies, from the country to the sector of economic activity, or among different regions within the same country and activity sector. Moreover, different variables and casual links are explored from one case study to another. In this sense, case studies are so context-specific that they might only be providing anecdotal evidence, adding too little to the academic or scientific knowledge on a given phenomenon (Rugraff *et al.*, 2009b). Secondly, how do we know that the case chosen for the study is relevant in any way?

As for the more specific body of literature on the FDI effects on Algerian development, this deals, mostly, with push and pull factors of FDI in the country. Martín (2001), Idir *et al.* (2005), Collado (2011), and Abid and Bahloul (2011) focus on the (real or potential) determinants of FDI flows to North Africa and/or to Algeria in particular.

Nonetheless, as pointed out by Salim (2008) and Bouzidi (2012), for the case of Algeria, where domestic savings are abundant, the relevance of FDI has mostly to do with its development effects –for instance, on the economic structure and on local companies– and not so much on its potential as a financing source.

According to Bouzidi (2012) several pre-conditions are necessary in order to trigger those positive development effects – education and qualification for knowledge transfer, and a strong business network for taking advantage of incoming know-how; that is, a certain level of absorbing capacity on the

⁵ Actually, Rugraff *et al.* (2009a) compile several works with a wide geographical coverage, including case-studies on Costa Rica, India, Africa, Central Europe, South Africa and Mali, Vietnam, or Ghana. This book also takes into account the sector differentiation, with case-studies on the electronics, mining or the pharmaceutical industry.

part of the Algerian economy. Cecchini and Lai-Tong (2008) come to a similar conclusion. FDI will have a positive impact on Algeria if primary and secondary school enrolment rates surpass 55 per cent. In that same vein, Salim (2008) underlines the potential of FDI in terms of technological transfer and balance of payments equilibrium, as well as the limited effects on employment and productive diversification. Martín (2001) warns on the risks of concentration and polarization of the economic activity, which lead to increased domestic inequalities.

2. FOREIGN DIRECT INVESTMENT AND DEVELOPMENT IN ALGERIA

Algeria is not –and has never been– a major destination for FDI. Previous analyses on FDI inflows in the region point out two main reasons. On the one hand, the economic structure is not FDI-attractive. Given that the economy is highly concentrated in the hydrocarbon sector, the FDI potential is not diversified into a high number of sectors. On the other hand, national strategies on FDI attraction might not be appealing, either. Like in other oil and gas economies, public control over property or natural resources (and the big investment projects needed for exploitation) multiplies the capacity for influence of public policies over foreign investment flows (in both quantitative and qualitative terms).

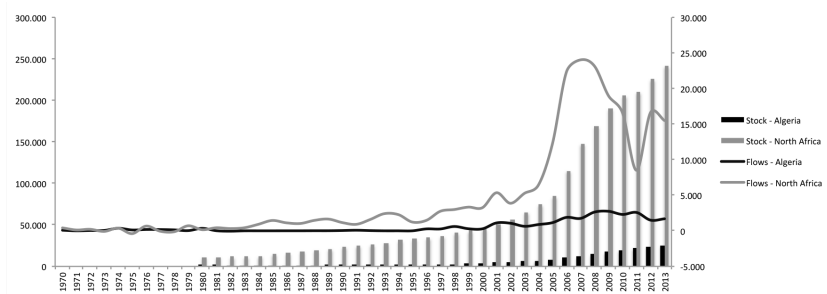
The history of FDI in this North African country cannot be understood without recognizing the role of the State in Algeria's development model. A French colony from 1830, the country gained independence in 1962, with the incoming government adopting what was called the 'revolution model' – betting on an industrialization process capable of changing the country's post-colonial productive role. This era saw the development of Algeria's steel industry, the creation of hydrocarbon poles, and the emergence of a textile industry (Chebira, 2008). This development model was financed by the revenues from abundant natural resources, avoiding foreign investment at a political moment of recovery of national identity. Through the 1970s and 80s, the weight of FDI continued to decrease. According to UNCTAD data, FDI inflows to Algeria in 1970 represented 18 per cent of total inflows in the North African region, and 1.78 per cent of Algeria's GDP. By 1990, these figures had decreased to 3.46 per cent and 0.06 per cent, respectively (figure 1).

At the same time, industrial and agricultural outcomes stagnated while demographic growth exploded, leading to an increase of food imports. Shrinking oil prices during the 1986 crisis frustrated the main driver of Algeria's development model and the financing capacity of the country (Chebira, 2008). Increased political and social instability resulted in nullification of the electoral process in 1991 – elections which had been won by the Islamic Salvation Front. This marked the beginning of a Civil War that lasted until the end of the decade.

The country recovered political stability in 1999, with the celebration of new elections and the signing of an amnesty, accompanied by a new phase of

high oil prices. The possibility for external financing emerged anew. This period heralded a timid opening to foreign capital and, in more general terms, a process of reform and (perhaps timid) liberalization. In this new phase, FDI was seen as part of the development process, given its technological transfer component. Investment inflows took off and accumulated capital stock increased by over four times in a decade. More precisely, during the 2002-2009 period, FDI inward stock and inflows increased at an average annual rate of more than 18 per cent and 17 per cent, respectively (Figure 1).

FIGURE 1. STOCK AND FLOWS OF FDI TO ALGERIA AND NORTH AFRICA (MILLIONS OF CURRENT US DOLLARS)



Source: UNCTAD.Stat

More recently, in 2009, a new turning point came regarding foreign investment and the role of the State in the development process, with the introduction of a new regulatory framework for TNC activities. According to representatives of the *Agence Nationale de Développement de l'Investissement* (ANDI), this regulatory change resulted from the evaluation of FDI-attraction measures adopted three years before. This evaluation found mixed results on FDI in Algeria. It identified an excessive rate of benefits returned to home countries, and high imports that weakened the balance of payments in a context of the international financial crisis. Nevertheless, this turn in FDI strategy can also be explained as a result of the struggle between the most extreme pro- and anti-reform sectors within the Administration. Those most reluctant to liberalize the entry of foreign capital (those that propelled regulatory and other changes in 2009) could be motivated in part by the control of revenues, on top of the sense of independence that comes with national ownership of resources.

In any case, the new legislation on investment established requisites in four fields: (1) transnational companies (TNCs) need to have a positive impact on balance of payments; (2) implementation of a national taxation on profits; (3) newly established companies must have a national partner (either public or private) holding 51 per cent of stock – on the basis that joint-ventures can facilitate external technological transfers; and (4) the investment project must be financed with Algerian banking capital – meaning that the international financing of projects is forbidden, with the aim of limiting external financial dependency and energizing

the local financial system (Chebira, 2008; Bouzidi, 2012). According to ANDI representatives during a meeting held under the framework of this research, this regulatory change also meant the identification of key sectors and targeted development impacts such as technological transfer, local development, job creation, and productive diversification. The implicit assumption is that the Algerian economy will be in a situation of vulnerability so long as it depends on hydrocarbons to the extent it does currently. On top of the inherent weaknesses of a mono-productive mono-exporter subject to swings in oil prices, Algeria's production capacities are limited and could be seriously drained within 20 years. According to that same source, these are the reasons why the local Administration needs to be much more selective with regard to FDI projects.

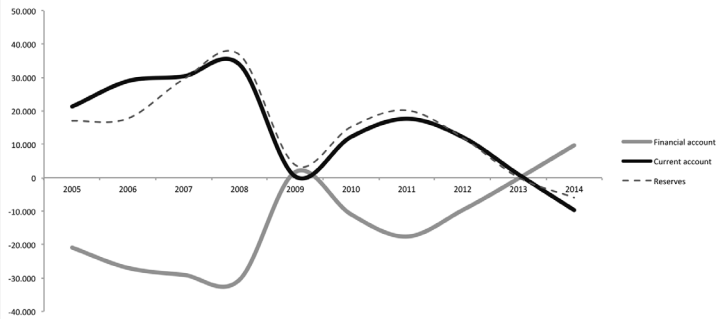
Currently, and since 2004, strategic sectors (as defined by the *Commission Nationale des Investissements* (CNI)) where projects managed by the ANDI need to focus include agriculture, fisheries, tourism, industry, health, transport, ICT, and renewable energies⁶.

In short, the Algerian authorities have been targeting three main objectives with this new regulatory framework: structural change (productive diversification, technological transfer via joint-ventures), balance of payments equilibrium (hindering profit repatriation, forcing local financing), and the contribution to local public goods (via taxation of companies). As will be shown in section 3, there may in fact be a 'natural' trade-off between these objectives, particularly when trying to foster structural change while guaranteeing balance of payments equilibrium.

Four years after these regulatory changes, the objective of balancing current and financial accounts had been achieved. The so-called '49/51 law' (and possibly other elements, such as the Arab Spring throughout the region) has definitively had an impact on the external financing of Algeria. During the 2009-2013 period, according to UNCTAD.Stat, FDI inflows had decreased by more than 8 per cent annually. However, from a wider financial point of view, in that specific juncture, this was not posing a major problem to the Algerian economy. According to World Bank data, previous to the implementation of the regulatory change, Algeria had been recording enormous current account surpluses in parallel to skyrocketing international crude and gas prices. In 2008, the current account balance was as high as 19.85 per cent of GDP. This was concurrent with increasing reserves and fiscal surplus (amounting to 9.3 per cent of GDP in 2008, according to the World Bank) as well as decreasing need for external financing (figure 2). In that same vein, the recent evolution of Algeria's balance of payments still follows that of international prices of oil and gas. In the post-crisis period, the North African country did manage to recover a current account surplus (nearly 9 per cent of GDP in 2011), but shrinking commodity prices are having an impact on Algeria's balance of payments—as in other countries with similar production and export profiles—and this has led to a current account deficit in 2014.

⁶ For more information, see <http://www.andi.dz/index.php/en/>

FIGURE 2. ALGERIA'S BALANCE OF PAYMENTS (IN MILLIONS OF CURRENT US DOLLARS)

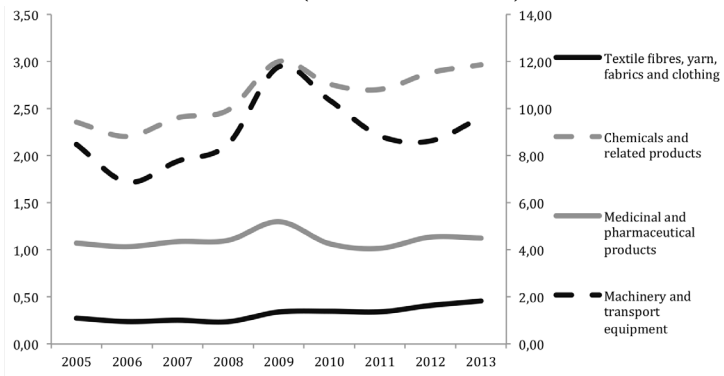


Source: World Bank, World Development Indicators online.

Algeria now places itself in a sort of time trap. In the short run, oil and gas reserves guarantee much needed external and fiscal revenues (although decreasingly –due to lower commodity prices), while in the longer term, they impact on the financial stability of the country; apart from the fact that they will eventually deplete.

Getting back to the 2009 regulatory changes, these lead to a ‘macroeconomic trade-off’ for Algeria. Such a demanding –as far as FDI is concerned– regulatory change was meant to diversify the productive structure of the Algerian economy and, therefore, reduce its dependency on imports. Specifically, imports of medications, cement, heavy industry, metals, and mechanical, textile, and chemical products were meant to decrease. However, such a process of structural change requires a long transition time. In fact, while recent data may reveal a slightly lower dependency of the Algerian economy on imported pharmaceutical products, imports of chemicals as well as textiles and equipment have risen in relation to GDP since 2009 (figure 3). Moreover, all these imports have increased in absolute terms.

FIGURE 3. SELECTED IMPORTS TO ALGERIA (AS A PERCENTAGE OF GDP)



Source: UNCTAD.Stat

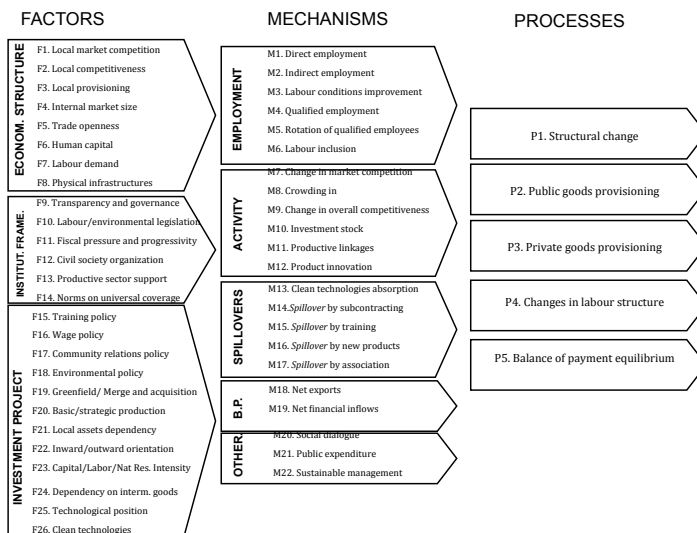
Note: Machinery and transport equipment are recorded in the secondary axis.

3. METHODOLOGY

Our aim is to identify a ‘development narrative’ that would let us understand what happens from the moment of arrival of an investment inflow to its development effect, by means of a specific case study; even if the results of such micro approach cannot be up-scaled at the national level (therefore, an econometric approach is discarded). In order to avoid the risk of providing mere anecdotal evidence (Rugraff *et al.*, 2009b), this case study should follow a theory or a methodological pattern for explaining the development effects of incoming FDI. As mentioned previously, such theoretical and methodological literature is scarce and limited to the technological derivatives of incoming FDI.

Therefore, in order catch a wider range of development effects, for the analysis of the effects of an FDI project in Algeria, we rely on a methodological framework that breaks down this ‘development narrative’ into three steps –factors, mechanisms, development processes. Factors refer to the features of the country (the economic structure and the institutional framework) and to those of the investment project itself. In this sense, this methodological framework somehow builds on the IDP theory. Different combinations of these factors will trigger different mechanisms (in the areas of balance of payments, economic activity, technology, employment, and/or socio-political mechanisms) that will, in the end, result in different development effects (in the fields of balance of payments, labor structure, provision of goods and services, contribution to local or global public goods, and/or structural change) (Olivié and Pérez, 2014, and figure 4).

FIGURE 4. A METHODOLOGICAL FRAMEWORK FOR TRACKING THE DEVELOPMENT EFFECTS OF FDI



Source: Authors (2014).

The use of this methodology requires approaching the phenomenon on a case-by-case basis where the unit of analysis is not the country –not even the sector or sub-sector– but rather a specific FDI project.

This study focuses on a cable manufacturing company, which differs from the typical FDI project in Algeria –those being concentrated in the extractive sector–. This may increase understanding of how diversification within the Algerian economy, as pursued by Algerian policies on foreign investment since 2009, may contribute to the main goals of such policies: structural change and balance of payments equilibrium. This will be analyzed following a methodological framework for the analysis of FDI and development (Olivié and Pérez, 2014).

This case belongs to one of the key sectors identified by the CNI, and we consider it a paradigmatic case in the context of the 2009 Algerian strategy to overcome economic vulnerability and hydrocarbon dependency through productive diversification. Paradigmatic cases –also described by Flyvbjerg (2006) as metaphorical or prototypical cases– match the defining features of a certain category of cases; and by analyzing such cases in depth, researchers may explain not only an individual case, but also help to understand a category of cases. This type of case study can be seen as an input for further quantitative research, if data are available, or for theoretical thinking.

Official data on the precise breakdown by sectors of FDI inflows or stock are not available. According to UNCTAD (2004), over ten years ago, foreign investors in Algeria were present in the hydrocarbon, finance and business, food industry, heavy industry, and tourism sectors, with a special focus in the extractive sector. Information provided by ANDI indicates a concentration of foreign capital in the industry sector (74 per cent in currency units, 56 per cent in number of projects)⁷. A high share of these projects are likely concentrated in the extractive sub-sector.

Quantitative and qualitative information was collected on the basis of a questionnaire (annex A) and a guide for providing information (annex B), respectively. This way, all necessary data for building the over 50 variables included in the framework was obtained. The general process for this data collection was the following: (1) an initial meeting with an executive from the company in the field, in order to gather general information on the TNC (activity sector, history of the company in the country, etc.); (2) submission to the contact person of both the questionnaire and the guide to qualitative information; (3) a second (phone) interview in order to resolve doubts and questions on the provision of data. Fieldwork for this particular case study was conducted between January and March 2013. This was part of a larger research project on the effects of FDI on development in North Africa implemented between 2011 and 2013.

⁷ See <http://www.andi.dz/index.php/fr/bilan-des-investissements>

As mentioned above, the factors of the investment project represent only one of three groups of features that might prove to be intervening in the mechanisms and processes triggered by a TNC's activity in the host country. Therefore, it was necessary to gather information on both the economic structure and the institutional framework of the country. For this compilation, several official national sources were explored: *Office National des Statistiques* (ONS), ANDI, *Centre National du Régistre du Commerce* (CNRC), the Ministry of Industry, the Ministry of Trade, the Ministry of Finance, and the Central Bank of Algeria. We also explored international databases such as the Statistical, Economic and Social Research and Training Centre for Islamic Studies (SESRIC), ANIMA Investment Network, the World Bank, the International Monetary Fund (IMF), the United Nations Conference for Trade and Development (UNCTAD), the United Nations Programme for Development (UNDP), the World Trade Organization (WTO), and the International Labor Organization (ILO).

In short, the monitoring of the development results of this particular investment project in Algeria was conducted on the basis of both quantitative and qualitative micro primary data collected directly from the company, from semi-structured interviews with elites, and from international databases.

4. RESULTS

4.1. JOB CREATION

This cable manufacturing company shows distinctive features with respect to the typical foreign investment project in Algeria. One important feature to be pointed out first is that this Egyptian company was already settled in Algeria before the implementation of the current regulation requiring 51 per cent participation by a local partner in any new investment project. This is a green-field project (F19), 100 per cent owned by Egyptian capital.

It could be said that this company has managed to immerse itself in the local economy. Its sales are domestically oriented, and it seeks local suppliers and, definitively, local employees (M1). According to the information collected, the qualitative effects on employment are dubious, but there is without a doubt net job creation (P4).

Since the arrival of the company, in 2007, employment has been steadily created (up to 560 jobs by 2013, the year in which information was collected). Therefore, this is a labor-intensive activity (F23) when compared to other FDI in other sectors such as fertilizers or desalination (Olivieri, Pérez and Gracia, 2013). As a matter of fact, this activity responds to one major challenge of the Algerian economy, its high unemployment rate. Over half these employees are so-called *exécution* workers – a low-qualification job (two years at a training center and no requirement of previous experience). This enterprise therefore facilitates access to the labor market by an active population of workers with low qualification, particularly very young workers without previous labor expe-

rience – a group for whom the incidence of unemployment is particularly high. Another category (*maîtrise* workers) constitutes 30 per cent of the company's workforce, the requisites for this category being at least three years of post-secondary education (Bac + 3) and between three and four years of prior labor experience. A third category, engineers, represents 5 per cent of the workforce, while executives make up the remaining 8 per cent of workers. Candidates for these categories are expected to have completed graduate studies (Bac + 5) and at least five years of work experience.

The impact on local job creation would not be especially intensive – despite the labor intensity of that particular economic activity– if an effort was not being made by the company to employ local human resources. According to information provided by the company, when the firm was established in Algeria, half the staff was expatriated from headquarters. When data were collected in 2013, this group amounted to less than 5 per cent of total personnel. It must be taken into account that this change was made over a period of only six years. Algeria's labor regulations have included incentives for hiring local employees, limiting the possibility of hiring foreign workers if there is an equivalent –in terms of profile and qualification– among the local labor supply (F10). However, the labor policy of the company itself is the main factor triggering the recruitment of Algerian personnel; according to company sources, a norm established by the TNC has limited foreign workers to 5 per cent of staff. This decision was made, according to the person in charge of human resources, out of a sense of social responsibility –in order to facilitate technology transfer and create local employment, but also as a way of avoiding excessive costs (such as housing, frequent travel, and other expenses) to the TNC.

It is more difficult to determine the effects on the features of the employment created by the company. As for wages, data provided by the company suggest that these are above the national average for the same level of qualification, and according to figures provided by KPMG (2012) they are well above the average for the activity sector (F16). Also according to KMPG, the average net salary is at 19,500 Algerian dinars per month.

TABLE 1. WAGE RANGE (MONTHLY NET WAGE IN CURRENT ALGERIAN DINARS)

	Cable manufacturer	National average
Executives (category 1)	80,000 – 120,000	32,000
Engineers (category 2)	35,000 – 50,000	
Maîtrise (category 3)	28,000 – 34,000	21,500
Exécution (category 4)	24,000 – 28,000	17,000

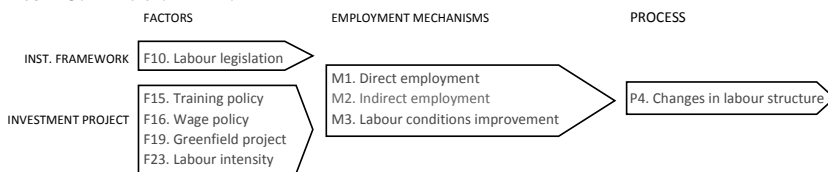
Source: KPMG (2012) for national salaries and cable manufacturer for own salaries.

According to information provided by the TNC, labor regulation in Algeria establishes that companies must reinvest 2 per cent of compensation to employees for formation activities (F10). Should this investment not occur, these

resources must be transferred to the State. This cable manufacturer has opted for the first alternative, which may be contributing positively to the formation and qualification of its workforce (F15). However, we observed no increased dynamism in the labor market of this particular sector; something that would be manifest, for instance, in the rotation of employees between companies (M5).

Lastly, it should be noted that in the case of a crowding-in effect in the supply chain –to be analyzed in a later section– indirect jobs (M2) could be created; an additional development effect (figure 5).

FIGURE 5. EFFECTS ON EMPLOYMENT



Source: Own elaboration.

Notes: Participates in a positive effect on development; the variable is not triggered, but might participate in a development dynamic in the medium term.

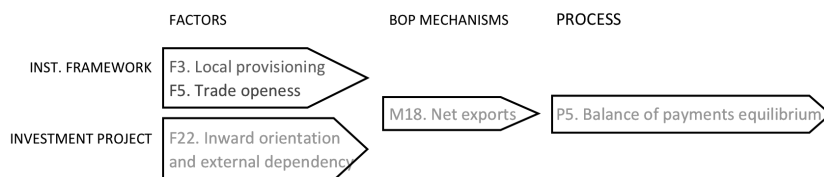
4.2. THE TNC HAS A NEGATIVE IMPACT ON THE EQUILIBRIUM OF THE BALANCE OF PAYMENTS

This cabling manufacturer contributes negatively to the equilibrium of Algeria's balance of payments (P5) via net imports (M18). As for its sales, these are 100 per cent inward-oriented (F22) –therefore contributing to the provision of goods and services– and the company does not record any exports (M18). More specifically, 70 per cent of products are sold directly or indirectly to Sonalgas (the local public company devoted to the extraction and commercialization of gas) while the remaining 30 per cent goes to the rest of the construction sector (hotels and resorts, malls, etc.). On the other side, imports amount to nearly 100 per cent of inputs necessary for production (figure 6).

Almost all purchases are of copper, aluminum, polyethylene, and PVC. These products are imported from Egypt (chiefly copper and PVC), France (aluminum), Spain (copper and other products such as containers), Bahrain (aluminum), and Belgium and Sweden (polyethylene). During data gathering, one executive of the company insisted that the motive for importing inputs is the impossibility of acquiring such products in the Algerian market. In fact, even when there no norms regulating and limiting imports (F5), legal and bureaucratic obstacles to buying outside the country are so huge that the company would benefit immensely from local provisioning of these inputs, which would lead in turn to lower fabrication costs and increased competitiveness. For these reasons, the company has initiated a process of supporting the creation of local suppliers that could substitute, at least partially, the company's imports

(F3). That is the case, for instance, with the TNC's support for creating a local manufacturer of the wooden spools necessary for reeling electrical cables. So the company is facilitating technological transfer through the introduction into the local market of new machinery, and by the creation of new business management teams.

FIGURE 6. EFFECTS ON THE BALANCE OF PAYMENTS



Source: Own elaboration.

Notes: Participates in a positive effect on development; the variable is not triggered, but might participate in a development dynamic in the medium term; participates in a negative effect on development.

However, it should be pointed out that the potential for import substitution is limited to between 30 and 40 per cent of local purchases –polyethylene and PVC– and that this would require a 10 to 15 year timeline. The remaining 60 to 70 per cent, concentrated in copper and aluminum, cannot be found in the local market.

Therefore, the possibility in the short or medium run of local provisioning (F3), triggered by the limited opening of trade (on the imports side) (F5), would allow a partial decrease in foreign dependency, which would reduce net imports (M18) as well as the negative effect on balance of payments (P5).

As concerns the financial account, this TNC is subject to Algerian regulation that forbids the external financing of local activities, forcing them to rely on the national banking system. Therefore, this cable manufacturer is contributing neither to the entry of foreign capital nor to the external indebtedness of Algeria (M19).

Moreover, given the capital intensity of the company (F23), and the fact that this is a young greenfield investment (F19), profits to date have been reinvested in productive activity. There had not been –at the time that interviews were conducted– a repatriation of profits which could have contributed negatively to the current account. However, one executive from the company mentioned that he expected to see a share of profits returned to Egyptian headquarters by 2013.

4.3. STRUCTURAL CHANGE

The product being manufactured is relatively basic (F20), so this entrepreneurial activity is not contributing to change the technological frontier (F25) of the Algerian aggregate supply. According to data and information provided by the company, its market share is significant (43 per cent); and this indicates the

lack of a crowding-in effect (M8) within the sector – regardless of the upstream productive linkages mentioned in the previous section (M11).

But this is a green-field investment (F19) in a non-traditional sector being targeted by national authorities (F13). It is adding to the Algerian investment stock (M10) and therefore having an impact on structural change (P1). Indeed, profit reinvestment led to an important accumulation of capital (F23) by the company that has more recently begun to slow (table 2).

TABLE 2. CAPITAL INTENSITY (MILLIONS OF CURRENT ALGERIAN DINARS)

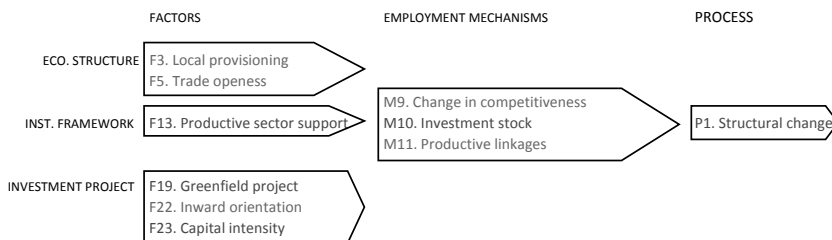
	Investment	Production	K / Y
2007	0	0	-
2008	1,500	0	-
2009	2,000	3,500	0.5714
2010	3,000	5,500	0.5454
2011	3,000	9,500	0.3158

Source: Own elaboration on the basis of data provided by the company.

Moreover, the company might be having an incipient, indirect impact on structural change. There may be changes in the levels of competitiveness (M9): the interviewees observed a certain dynamism among the sector's competitors that may result in higher competitiveness. The TNC's main competitors – established for decades in the Algerian economy – have recently started to update their machinery and employee training and to hire new managers.

Lastly, the above-mentioned combination of the drive for local provisioning (F3) on the part of the company, public limitations for acquiring inputs outside the country (F5), and intense inward-orientation (F22) can, potentially, end by generating an effect on productive linkages (M11) that could result in a process of structural change (P1) (figure 7).

FIGURE 7. EFFECTS ON STRUCTURAL CHANGE



Source: Own elaboration.

Notes: Participates in a positive effect on development; the variable is not triggered, but might participate in a development dynamic in the medium term.

5. CONCLUSIONS

This article shows the complexity of development processes, elucidating the difficulty inherent in gauging the development effects that FDI might incur. This complexity may have not arose with a different methodology: an econometric approach would not have been feasible due to statistical limitations and, if feasible, would have hidden the steps linking FDI and its effects on, on the one hand, the balance of payments and, on the other, structural change. This case study, based on a standardized methodology, not only allows for digging in the micro-tale of this FDI-development nexus. It also provides with a general framework that makes similar case studies (conducted with that same framework) comparable.

This very specific case of an Egyptian cable manufacturer situated in Algeria simultaneously records a positive effect on job creation and structural change and a negative impact on the balance of payments equilibrium.

This investment project responds partially to the expectations of the national FDI and development strategy, in the sense that it is contributing to productive diversification. It also tackles domestic development needs by creating jobs. However, this activity is not only not enhancing the balance of payments equilibrium but is actually worsening it (at the micro scale). This is likely to occur when introducing into an economy new activities which may in turn introduce new supply needs that can be met only through new imports. In other words, this case study provides a narrative at the micro scale of what can be termed a balance of payments equilibrium / structural change trap. This could be considered the very macroeconomic trade-off in which a majority of developing and emerging countries have traditionally been embroiled, as, actually, the Structuralist and Neo-structuralist approaches have pointed out.

It is important to underline that these results cannot be up-scaled at the national level. It would take all FDI projects in all sectors of the Algerian economy to behave exactly the same way in order to conclude that FDI at a national scale leads to job creation and structural change while dis-equilibrating the balance of payments. However, in exchange, this very specific case study provides (comparatively to other macro approaches) richness in details: a narrative on the FDI-development link.

REFERENCES

- Abdelhafidh, S. (2013), "Potential Financing Sources of Investment and Economic Growth in North African Countries: A Causality Analysis", *Journal of Policy Modeling* 35: 150-169.
- Abid, F. and S. Bahloul (2011), "Selected MENA countries' attractiveness to G7 investors", *Economic Modelling* 28 (5): 2197-2207.
- Agbola, F. (2014), "Modelling the Impact of Foreign Direct Investment and Human Capital on Economic Growth: Empirical Evidence from the Philippines", *Journal of the Asia Pacific Economy* 19(2): 272-289.

- Ali, F.; Fiess, N. and MacDonald, R. (2011), "Climbing to the Top? Foreign Direct Investment and Property Rights", *Economic Inquiry* 49(1): 289-302.
- Amsden, A. (1989), *Asia's Next Giant. South Korea and Late Industrialization*, Oxford University Press.
- Auty, R. M. (2001), "The Political Economy of Resource-Driven Growth" *European Economic Review* 45 (4-6): 839-46.
- Belloumi, M. (2014), "The Relationship Between Trade, FDI and Economic Growth in Tunisia: An Application of the Autoregressive Distributed Lag Model", *Economic Systems* 38(2): 269-287.
- Blalock, G. and Gertler, P. J. (2005), "Foreign Direct Investment and Externalities: The Case for Public Intervention", in Theodore H. Moran, Edward M. Graham and Magnus Blomström (eds), *Does Foreign Direct Investment Promote Development?*, Institute for International Economics and Center for Global Development, Washington DC.
- Bouzidi, A. (2012), "L'Algérie attire de plus en plus d'IDE", *El-Djazair* 54, September.
- Cecchini, L. and C. Lai-Tong (2008), "The Links Between Openness and Productivity in Mediterranean Countries", *Applied Economics* 40 (6): 685-697.
- Chang, H.(2002), *Kicking Away the Ladder: Development Strategies in Historical Perspective*, Anthem Press, London.
- Chebira, B. (2008), "IDE et développement en Algérie", *mimeo*, University of Annaba.
- Collado, J. (2011), "El impacto de la desaceleración económica global en los países árabes mediterráneos" en *El mediterráneo: cruce de intereses estratégicos*, Monografías del CESEDEN 118, Centro Superior de Estudios de la Defensa Nacional, January.
- Corden, W. M. and J. P. Neary (1982), "Booming Sector and De-industrialisation in a Small Open Economy", *The Economic Journal* 92 (368): 825-848.
- Crabtree, B. F. and W. L. Miller (1999), *Doing Qualitative Research*, Sage Publications, 2nd edition, Thousand Oaks, California.
- Cuadros, A. y M. Alguacil (2014), "Productivity Spillovers Through Foreign Transactions: the Role of Sector Composition and Local Conditions", *Emerging Markets Finance and Trade* 50(2): 75-88.
- Cypher, J. M. and J. L. Dietz (2009), *The Process of Economic Development*, Routledge, New York.
- Dragin, A.; D. Jovicic and D. Boskovic (2010), "Economic Impact of Cruise Tourism along the Pan-European Corridor VII", *Economic Research* 23(4): 127-141.
- Flyvbjerg, B. (2006), "Five Misunderstandings about Case-Study Research", *Qualitative Inquiry* 12 (2):219-245.
- Dunning, J. H. (1981), "Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Development Approach" in Dunning, *International Production and the Multinational Enterprise*, 109-141. Crows Nest: Allen and Unwin.
- Dunning, J. H. (1988) "The Investment Development Cycle and Third World Multinationals" in Dunning, *Explaining International Production*, 140-168, London and Boston, MA: Unwin and Hyman.

- Idir, N.; A. Kamali and Elif (2005), "Integration régionale sud-sud et investissements directs étrangers: effet taille de marché", *mimeo*, EPN-CNRS UMR7115, Centre d'Économie de Paris-Nord, Paris.
- KPMG (2012), *Guide pour investir en Algérie*, Edition 2012, KPMG Algérie.
- Krugman, P. (1987), "The Narrow Moving Band, the Dutch Disease and the Competitive Consequences of Mrs. Thatcher on Trade in the Presence of Dynamic Scale Economies" *Journal of Development Economics* 27 (1-2): 41–55.
- Kumar, R. (2014), "Exploring the Nexus Between Capital Inflows and Growth in Latin America and the Caribbean: A Study of Clusters Led by Brazil and Mexico", *Quality and Quantity* 48(5): 2537-2552.
- Lall, S. and P. Streeten (1977), *Foreign Investment, Transnationals and Developing Countries*, Macmillan, London.
- Lessmann, C. (2013), "Foreign Direct Investment and Regional Inequality: A Panel Data Analysis", *China Economic Review* 24: 129-149.
- Martín, I. (2001), "La inversión extranjera directa en los países del Maghreb en el marco de la Asociación Euromediterránea: ¿el eslabón perdido?", *Revista de Economía Mundial* 4: 175-206.
- Moran, T. H. (2011), *Foreign Direct Investment and Development. Launching a Second Generation of Policy Research*, Washington, DC: Peterson Institute for International Economics.
- Narula, R. and J. H. Dunning (2000) "Industrial Development, Globalisation and Multinational Enterprises: New Realities for Developing Countries." *Oxford Development Studies* 28 (2): 141–167.
- Narula, R. and J. H. Dunning (2010) "Multinational Enterprises, Development and Globalisation: Some Clarifications and a Research Agenda." *Oxford Development Studies* 38 (3): 263–287.
- Ndikumana, L. and S. Verick (2008), "The Linkages between FDI and Domestic Investment: Unravelling the Developmental Impact of Foreign Investment in Sub-Saharan Africa", *Development Policy Review*, 26(6): 713-726.
- Olivié, I.; A. Pérez and M. Gracia (2013), "¿Más allá del hidrocarburo? Modalidades de inversión extranjera y sus efectos en el desarrollo de Argelia" *Documento de Trabajo* 8/2013: 1-32, Real Instituto Elcano.
- Olivié, I. and A. Pérez (2014), "How to Deal with the 'Black Box' of Foreign Investment and Development? A Case Study in the Dominican Republic and a Methodological Proposal", *Canadian Journal of Development Studies* 35(4): 539-559.
- Reuber, Grant L.; H. Crookell; M. Emerson and G. Gallais-Hamonno (1973), *Private Foreign Investment in Development*, Clarendon Press, Oxford.
- Rogmans, T. and H. Ebbers (2013), "The Determinants of Foreign Direct Investment in the Middle East North Africa Region", *International Journal of Emerging Markets* 8 (3): 240-257.
- Ross, M. L. (2004), "What Do We Know About Natural Resources and Civil War?", *Journal of Peace Research* 41 (3): 337–56.

- Rugraff, E.; D. Sánchez-Ancochea and A. Sumner (2009a), *Transnational Corporations and Development Policy. Critical Perspectives*, Palgrave Macmillan, Hampshire.
- Rugraff, E.; D. Sánchez-Ancochea and A. Sumner (2009b), "What do We Know about the Developmental Impacts of TNCs?" in Rugraff, E., D. Sánchez-Ancochea and A. Sumner (2009), *Transnational Corporations and Development Policy. Critical Perspectives*, Chapter 2: 29-58, Palgrave Macmillan, Hampshire.
- Sachs, J. D. and A. M. Warner (2001), "Natural Resources and Economic Development: The Curse of Natural Resources", *European Economic Review* 45 (4-6): 827-838.
- Salim, R. (2008) "Foreign Direct Investment: The Growth Engine to Algeria", *Korea Review of International Studies*: 79-98.
- Schrank, A. (2004), "Ready-to-Wear Development? Foreign Investment, Technology Transfer, and Learning by Watching in the Apparel Trade" in *Social Forces* 83(1), September.
- Schrank, A. (2006), "Case-Based Research" in Perecman, E. and S.R. Curran (2006), *Handbook for Social Science: Field Research Essays & Bibliographic Sources in Research Design and Methods*, Chapter 2: 21-46, Sage, Thousand Oaks, California.
- Schrank, A. (2008), "Export-Processing Zones in the Dominican Republic: Schools or Stopgaps?", *World Development* 36(8): 1381-1397.
- Seyoum, M.; R. Wu and J. Lin (2014), "Foreign Direct Investment and Trade Openness in Sub-Saharan Economies: A Panel Data Granger Causality Analysis", *South African Journal of Economics* 82(3): 402-421.
- Silverman, D. (2000), *Doing Qualitative Research. A Practical Guide*, Sage Publications, Thousand Oaks, California.
- UNCTAD (2004), *Investment Policy Review: Algeria*, United Nations Conference for Trade and Development, Geneva.
- Wang, D. T. and W. Y. Chen (2014), "Foreign Direct Investment, Institutional Development and Environmental Externalities: Evidence from China", *Journal of Environmental Management* 135: 81-90.
- Zhang, C.; B. Guo and J. Wang (2014), "The Different Impacts of Home Countries Characteristics in FDI on Chinese Spillover Effects: Based on One-Stage SFA", *Economic Modelling* 38: 572-580.

ANNEX A

PROJET DE RECHERCHE: "INVESTISSEMENT ÉTRANGER ET DÉVELOPPEMENT- OPPORTUNITÉS
POUR LES PAYS D'AFRIQUE DU NORD"

ENQUÊTE AUX ENTREPRISES

1 (A4). Quel est votre chiffre d'affaires du dernier exercice fiscal?

2 (A5). Quel est votre *share* dans le marché?

3 (A6). Quelle est la ratio investissement / chiffre d'affaires et son évolution pendant les 5 dernières années?

2007

2008

2009

2010

2011

4 (B1). Quel pourcentage représentent-ils les approvisionnement sur votre chiffre d'affaires ?

(B2) Quels sont vos approvisionnements principaux :

Produit 1

Produit 2

Produit 3

Produit 4

Produit 5

5 (B3). Sont-ils locaux?

Produit 1	Oui	Non
-----------	-----	-----

Produit 2	Oui	Non
-----------	-----	-----

Produit 3	Oui	Non
-----------	-----	-----

Produit 4	Oui	Non
-----------	-----	-----

Produit 5	Oui	Non
-----------	-----	-----

6 (B4). Parce que vous n'avez pas le choix?

Produit 1	Oui	Non
-----------	-----	-----

Produit 2	Oui	Non
-----------	-----	-----

Produit 3	Oui	Non
Produit 4	Oui	Non
Produit 5	Oui	Non

Commentaires

7 (C1). Importez-vous des produits de l'extérieur?

Oui Non

Lesquels?

8 (C2). Quel pourcentage représentent les importations en relation avec vos achats totaux?

9 (C3). Dans votre cas, quels sont les pays d'importation?

Pays 1
Pays 2
Pays 3
Pays 4
Pays 5

10 (C4). Comment distribuez-vous vos ventes à l'intérieur et à l'extérieur du pays?

Pourcentage des ventes....		
...à l'intérieur du pays		%
...à l'extérieur du pays		%

11 (C5). Dans votre cas, quels sont les pays d'exportation?

12 (C6). De vos lignes de financement, existe-t-il une partie d'endettement extérieur? Quelle pourcentage représente-t-elle du financement total?

Oui Non

Part (%)

13 (C7). Rapatriez-vous vos bénéfices au pays d'origine de l'investissement ou dans un autre pays ?

Oui Non

Part (%)

14 (D1). Faites une évaluation de la compétitivité du secteur avant l'initiation de vos activités

0 (nulle) - 5 (très élevée)

15 (G1). Combien de travailleurs a votre entreprise / projet d'investissement?

16 (G2). Catégories professionnelles?

Titre catégorie 1
Titre catégorie 2
Titre catégorie 3
Titre catégorie 4
Titre catégorie 5

17 (G3). Salaire moyen?

Catégorie 1
Catégorie 2
Catégorie 3
Catégorie 4
Catégorie 5

18 (G4). Évaluation de la législation: favorise-t-elle l'emploi et la formation de personnel local?

0 (mauvaise) - 5 (excellente)

19 (G5). Évaluation de la qualification du capital humain pour votre activité productive.

0 (mauvaise) - 5 (excellente)

20 (G7). Existent-il d'autres demandes d'emploi sur vos ressources humaines? Évaluez la pression de la demande sur vos employés.

0 (base) - 5 (très haute)

21 (H6). Quelle évaluation faites vous du différentiel en technologies propres par rapport à vos concurrents? (procès de production, biens d'équipes, etc.)?

0 (nul) - 5 (élevé)

22 (H8). Quels impôts, taux publiques ou d'autres prélèvements doit payer votre entreprise? Quel pourcentage représente-t-ils de votre chiffre d'affaires?

Lesquels?

Part des ventes totales (%)

23 (H9). Selon votre expérience personnelle, avez-vous détecté des problèmes de corruption?

0 (aucun) - 5 (beaucoup)

24 (H11). Quelle évaluation faites vous des infrastructures locales pour la réalisation de votre activité productive?

0 (mauvaise) - 5 (excellente)

ANNEX B

PROJET DE RECHERCHE: "INVESTISSEMENT ÉTRANGER ET DÉVELOPPEMENT- OPPORTUNITÉS POUR LES PAYS D'AFRIQUE DU NORD"

PLAN DE L'ENTRETIEN

A	<i>Activité et création de l'entreprise</i>
A1	Quel est l'objet de votre activité productive?
A2	Dans quel secteur et sous-secteur productif se trouve votre activité économique?
A3	Existait-il des produits / services similaires aux vôtres avant votre début d'activité?
A7	L'entreprise est-elle de nouvelle création ou le résultat d'une fusion ou d'une acquisition?
A8	Qui sont vos clients?
A9	Avez vous observé dans vos marchés de vente de nouvelles entrées ou investissements?
B	<i>Fournisseurs</i>
B5	Il y a t'il une législation ou obligation d'achats locaux?
B6	Avez-vous observé de nouvelles entrées ou de nouveaux investissements dans votre chaîne de fournisseurs?
B7	Avez-vous observé la création de nouveaux emplois dans votre chaîne de fournisseurs?
C	<i>Insertion extérieure</i>
C8	De quelle manière facilite ou difficulté la législation vos exportations et vos importations?
D	<i>Concurrence du marché</i>
D2	Quelle est votre principale concurrence (numéro de compagnies, taille, noms...)?
D3	Quelle a été la réaction de votre concurrence à votre entrée / croissance dans le secteur / marché? Par exemple, observez-vous un effet imitation ?
D4	Avez-vous observé de nouvelles entrées/ investissements entre vos concurrents?
E	<i>Intensité / transfert technologique</i>
E1	Quelle est votre évaluation du différentiel technologique para rapport à vos concurrents (procès productif, biens d'équipés, etc.)?
E2	Quelles sont les exigences technologiques de votre entreprise sur les fournisseurs et comment sont-elles répondues par vos fournisseurs locaux?
E3	Quel est le rôle de votre entreprise avec les améliorations technologiques dans votre chaîne de fournisseurs?
G	<i>Travail</i>
G6	Avez-vous une politique de formation officielle ou informelle? Décrivez-la
G8	Avez-vous besoin d'embaucher du personnel étranger? Quelles sont les avantages et les inconvénients par rapport aux employés locaux?
G9	Avec quels critères votre entreprise décide-t-elle les rémunérations? Avez-vous formalisé ces critères?

<i>H</i>	<i>Fiscalité, communauté et environnement</i>
H1	Quelles organisations de la société civile ont contacté votre entreprise?
H2	Avez-vous une politique de relations avec la communauté où vous opérez (voisins, autorités locales, universités, etc.)? Décrivez-la
H3	Comment collabore votre entreprise avec l'environnement? Avez-vous adopté un compromis formel par écrit en matière environnementale?
H4	Quelles lois environnementales ont eu un impact sur les opérations de votre entreprise?
H5	Quelles investissements ont été réalisés par votre entreprise en technologies propres?
H7	Avez-vous transférés vos technologies propres à des fournisseurs, clients ou concurrents? Décrivez la situation.
H10	Faites-vous une ou plusieurs contributions volontaires financières a la communauté?

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